AMENDMENTS TO THE CLAIMS

Claims 1-36 (Canceled)

Claim 37 (New)   A semiconductor manufacturing system for producing a substrate to be treated including a controller for controlling an operation of the semiconductor manufacturing system by carrying out a control program according to the following events:

a standby event for charging a substrate in a boat;

a boat-up event for loading the boat in a reactor by raising an elevator;

a ramping-up event for gradually raising a temperature;

a process event for growing a film on a substrate;

a ramping-down event for gradually decreasing a temperature;

a boat-down event for drawing the boat from the reactor by lowering the elevator; and

a standby event for discharging the substrate from the boat, wherein the controller includes functions for:

determining a timing at which the control program can be changed, wherein the process event for growing a film on a substrate is not determined as a time for changing the control program; and

storing the control program in a memory, in accordance with a result of said determining, so as to be carried out with a processor.

Claim 38 (New)   The semiconductor manufacturing system according to Claim 37, wherein the controller includes a function to temporarily hold the control program so as to store the control program held in the buffer in the memory.

Claim 39 (New)   The semiconductor manufacturing system according to Claim 37, wherein the control program of the controller is changed while a temperature is in a constant state same as a state of which the reaction chamber is in a standby state.

Claim 40 (New)   The semiconductor manufacturing system according to Claim 37, wherein the standby event for charging the substrate to the boat is determined as the timing for changing the control program.

Claim 41 (New)   The semiconductor manufacturing system according to Claim 37, wherein the boat-up event for loading the boat in a reactor by raising an elevator is determined as the timing for changing the control program.

Claim 42 (New)   The semiconductor manufacturing system according to Claim 37, wherein a boat-down event for drawing the boat from the reactor by lowering the elevator is determined as the timing for changing the control program.

Claim 43 (New)   The semiconductor manufacturing system according to Claim 37, wherein a standby event for discharging the substrate from the boat is determined as the timing for changing the control program.

Claim 44 (New)   A semiconductor manufacturing system for producing a substrate to be treated including a controller for controlling an operation of the semiconductor manufacturing system by carrying out a control program according to the following events:

    a standby event for charging a substrate in a boat;

    a boat-up event for loading the boat in a reactor by raising an elevator;

    a ramping-up event for gradually raising a temperature;

    a process event for forming a film on a substrate;

    a ramping-down event for gradually decreasing a temperature;

    a boat-down event for drawing the boat from the reactor by lowering the elevator; and

    a standby event for discharging the substrate from the boat, wherein the controller includes functions for:

    determining a timing at which the control program can be changed;

storing a new control program in a memory, in accordance with a result of said determining, so as to be carried out with a processor, wherein the process event for forming a film on the substrate is not determined as the timing for changing the control program; and

holding data used to carry out a prior control program so as to carry out the new control program stored in the memory with the processor by employing prior data.

Claim 45 (New) The semiconductor manufacturing system according to Claim 44, wherein the controller includes a function to temporarily hold the control program so as to store the control program held in the buffer in the memory.

Claim 46 (New) The semiconductor manufacturing system according to Claim 44, wherein the control program of the controller is changed while a temperature is in a constant state same as a state of which the reaction chamber is in a standby state.

Claim 47 (New) The semiconductor manufacturing system according to Claim 44, wherein the standby event for charging the substrate to the boat is determined as the timing for changing the control program.

Claim 48 (New) The semiconductor manufacturing system according to Claim 44, wherein the boat-up event for loading the boat in a reactor by raising an elevator is determined as the timing for changing the control program.

Claim 49 (New) The semiconductor manufacturing system according to Claim 44, wherein a boat-down event for drawing the boat from the reactor by lowering the elevator is determined as the timing for changing the control program.

Claim 50 (New) The semiconductor manufacturing system according to Claim 44, wherein a standby event for discharging the substrate from the boat is determined as the timing for changing the control program.

Claim 51 (New) A semiconductor manufacturing system for producing a substrate to be treated comprising a controller for controlling an operation of the semiconductor manufacturing system by carrying out a control program, the controller including functions for:

holding data used for carrying out a prior control program;

temporarily holding a new control program;

receiving instruction as to an input of a change from a user; and

storing the new control program in a memory, so that it can be carried out by a processor, according to the instruction, wherein the control program is changed at a timing when the controller to which the control program is supplied does not carry out a control process.

Claim 52 (New) A semiconductor manufacturing system according to Claim 51, wherein the control program is changed at a timing when the semiconductor manufacturing system itself is standing by or has suspended operation.

Claim 53 (New) A semiconductor manufacturing system according to Claim 51, wherein the controller is a temperature controller and a control program of the temperature controller is changed at a timing when the temperature in the reaction chamber is constant and the same as a standby state.

Claim 54 (New) A semiconductor manufacturing system according to Claim 51, wherein the controller is a mechanical controller and the control program of the mechanical controller and the control program of the mechanical controller is changed at a timing when a robot arm or an elevator is stopped.

Claim 55 (New) A semiconductor manufacturing system according to Claim 51, wherein the controller is a gas controller and the control program is changed at a timing when no gas is supplied to the reaction chamber.